# Matthew Okner

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## Education

**University of California, Berkeley** **Expected Graduation: May 2027**

*Bachelor of Science – Electrical Engineering and Computer Science* *Berkeley, California*

- Honors Scholar — **GPA: 4.0**
- Courses: Machine Learning, Probability and Random Processes, Computer Architecture and Machine Structures, Data Structures and Algorithms, Signals and Information Processing, Discrete Mathematics and Probability Theory, Foundations of Data Science, Blockchain for Developers

## Work Experience

**Wrodium** **Jan 2026 – March 2026**

*Software Engineering Intern* *Berkeley, California*

- Built a **content synchronization pipeline** that parses external URLs, computes structural diffs against internal mirrors, and generates **approve/reject change proposals** via an inline review interface
- Designed a **retrieval-augmented content refresh system** integrating the **Perplexity Deep Research API** with **PostgreSQL**, enabling automated detection of stale content and generation of revision suggestions
- Developed **scalable scraping and backfill pipelines** in **Python** and **TypeScript** using **BeautifulSoup**, **Cheerio**, and **n8n**, with **scheduling, retry logic, and deduplication** across 500+ documents

**San Jose State University** **May 2023 – August 2023**

*Software Researcher* *San Jose, California*

- Trained a **multilayer perceptron (MLP)** on **15,000+ labeled samples** across **10 malware families**, hitting **91% accuracy** on held-out test data
- Built **feature extraction pipelines** from **opcode sequences**, **byte sequences**, and **byte histograms** to produce structured inputs for model training

## Projects

**Sage.ai** | *Devpost* | *Source Code* **Twilio | Deepgram | Anthropic API | MongoDB**

- Built a **real-time voice agent** using **Twilio** (telephony), **Deepgram** (ASR), and the **Anthropic API** — audio in, spoken response out, under 1s latency
- Designed an **event-driven pipeline** for call handling: transcription, LLM inference, and **stateful conversation tracking** across turns
- Wired **Google Calendar** into the conversation layer so the agent could book appointments mid-call without dropping context

**Automatic Irrigigation System** | *Research Paper* | *Source Code* **Flask | Raspberry Pi**

- Developed an automated irrigation system using a **Raspberry Pi** and **soil sensors** for precise, data-driven water control.
- Implemented a **cloud-based interface** for remote monitoring, hosted directly on the Raspberry Pi server.

## Leadership

**West Valley College EECS Club** **Aug 2024 – May 2025**

*President* *Saratoga, California*

- Led a team of **25+ members** to design and build hands-on engineering projects, including an **stock-trading prediction bot** using LSTMs and PyTorch.
- Organized and taught **weekly workshops** on programming, circuit design, and data science fundamentals to improve technical engagement.
- Expanded club participation by **60%** and established partnerships with **faculty mentors** to support student-led research.

## Technical Skills

**Languages**: Python, C++, Java, ARM Assembly, JavaScript, HTML, CSS, SQL

**Libraries/Frameworks**: TensorFlow, PyTorch, NumPy, Pandas, Scikit-learn, BeautifulSoup4, Flask, ReactJS, NodeJS

**Developer Tools**: Git, Docker, Raspberry Pi, Arduino, MongoDB, Google Cloud, Anthropic API

**Operating Systems**: macOS, Linux, Windows